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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,701	12/12/2003	William R. Mass	279.302US2	2320
21186	7590	11/02/2006	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			EVANISKO, GEORGE ROBERT	
			ART UNIT	PAPER NUMBER
			3762	

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,701

Applicant(s)

MASS ET AL.

Examiner

George R. Evanisko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-36 is/are pending in the application.
- 4a) Of the above claim(s) 32-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/12/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 17-31, drawn to a method of transmitting or receiving data from an IMD, classified in class 607, subclass 60.
- II. Claims 32-36, drawn to an IMD, classified in class 607, subclass 32.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed could be practiced by another and materially different apparatus not requiring a therapy circuit but just being used for sensing physiological signals.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art due to their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Timothy Bianchi on 10/27/06 a provisional election was made without traverse to prosecute the invention of group I, claims 17-31.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 32-36 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 17, a “method for transmitting and receiving” is vague since it is inconsistent with the positive recitation of “transmitting or receiving” signals. The examiner has interpreted the claim as being for transmitting OR receiving signals since that is what has been positively set forth as a method step. In line 4, “of a housing” is vague since it is unclear what housing is being discussed. It is suggested to use “of a housing of said implantable medical device”. In line 5, “emitting...energy” is vague since if the system receives the carrier (used in line 3), it will not be “emitting” the energy. In line 5, “of radio-frequency energy” is vague since it is unclear if this is the same as the “radio frequency carrier” used in line 3 or the same as the “radio frequency signals” used in line 1. It is suggested to use the same term for any of the RF signals/energy/carrier. In line 5, “delivered” to the antenna is vague since no step has been set forth to “deliver” energy to the antenna.

In claim 18, "the transmitting/receiving circuitry" lacks antecedent basis and "a" specified carrier frequency is vague since it is unclear if this is the same carrier used in claim 17 or a different carrier (it is suggested to use "said" specified carrier frequency).

In claim 19, both occurrences of "generated" are vague since no step has been set forth for "generating" the signal; and "the transmitter/receiver circuitry" lacks antecedent basis./

In claim 20, "a" specified carrier frequency is vague.

In claims 21 and 27, "a" dipole and "a" housing are vague.

In claim 26, "a header compartment" is vague since it is unclear what the scope and limitations of a header compartment include.

In claim 30 and 31, "a" modulated and "a" specified are vague.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 17, 21, 25, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Hochman (4515167). Hochman discloses a dipole antenna (e.g. column 8, line 36) using two halves of a conductive housing, 11 and 12, separated by an insulator/header (since the electrodes are attached to it), 13, having an rf oscillator, 21, matching circuitry, 22, a battery and stimulus circuitry (columns 6 and 7).

Claims 17, 18, 21, 25, 26, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Stover (6804561). Stover discloses an antenna operating at 402 MHz (col 2) using a tuning circuit with capacitors (column 2) and using two metal cylinders or semi cylinders of the housing as the antenna separated by an insulator/header (column 4, lines 8-9). It is noted that Stover calls his antenna a loop antenna but is still considered a "dipole antenna" since he shows two equal sections of the antenna extending in opposite directions with a center fed driven element and/or since he shows the configuration of a "loop dipole antenna" or "folded dipole antenna".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 18-20, 22-24, and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hochman (or over Stover for claims 19, 20, 22-24, 27-29, and 31).

Hochman (or Stover) discloses the claimed invention except for the loading of the antenna with inductance/capacitance (claim 18), using a balun transformer for converting the signal (claim 19), adjusting the frequency with a variable capacitor to 300 MHz to 1 GHz or about 2.2 GHz (claims 20, 30, and 31), putting the different circuitry into one or the other half of the housing (claims 22-24) and filtering the conductors from the electrodes and passing a band of frequencies from the electrodes (claims 27-29), and in the alternative for claim 25, for sizing for one half the wavelength. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the antenna device and method as taught by Hochman (or Stover), with the loading of the antenna with inductance/capacitance (claim 18), using a balun transformer for converting the signal (claim 19), adjusting the frequency with a variable capacitor to 300 MHz to 1 GHz or about 2.2 GHz (claims 20, 30, and 31), putting the different circuitry into one or the other half of the housing (claims 22-24) and filtering the conductors from the electrodes and passing a band of frequencies from the electrodes (claims 27-29), and for sizing for one half the wavelength since it was known in the art that antenna devices and methods use: the loading of the antenna with inductance/capacitance to obtain the proper tuning/resonance of the antenna; using a balun transformer for converting the signal (claim 19) to convert unbalanced, single ended signals into balanced, differential signals and vice versa and/or balance the feedline with the antenna and ensure optimum current distribution; adjusting the frequency with a variable capacitor to 300 MHz to 1 GHz or about 2.2 GHz (claims 20, 30, and 31) for allowing greater flexibility and enhanced communication in determining the carrier frequency of the device and using a frequency for the signals that have been set aside for electronic device communications and/or providing greater bandwidth; putting the different

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circuitry into one or the other half of the housing (claims 22-24) to optimize the configuration, spacing, and relative location of components to minimize the size of the device, feedthroughs, and connections; filtering the conductors from the electrodes and passing a band of frequencies from the electrodes (claims 27-29) to remove unwanted noise from the electrodes and pass frequencies of interest; and for sizing for one half the wavelength for setting the desired operating frequency of the antenna.

In addition, for the different location of components in the housing, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place the different components of Hochman (or Stover) in different housing parts, since it has been held that a mere rearrangement of parts involves only routing skill in the art (*In re Japikse*, 181 F.2d 1019, 86 USPQ 70, *In re Kuhle*, 526 F.2d 553, 188 USPQ 7) and/or a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following is a list of prior art that are examples (of many) showing some of the elements/steps that are common knowledge in the art: Sun for the one half wavelength antenna; Gu and Ito for the balun transformer; Weijand for the variable capacitor; Stover for the capacitor for the tuning circuit

The art rejection(s) discussed above uses reference numerals and paragraph/column numbers to point out the claimed elements. It is noted that these numerals and numbers are

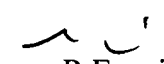
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examples of the claimed limitations and that the prior art in the rejection may contain other areas not pointed out by the Examiner that meet the claimed limitations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Evanisko whose telephone number is 571 272 4945. The examiner can normally be reached on M-F 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571 272 4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


George R Evanisko
Primary Examiner
Art Unit 3762

10/30/6

GRE
October 30, 2006